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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: JANE ZARA Examiner #: 77512 Date: 3-6-07
Art Unit: 1635 Phone Number: 2-0765 Serial Number: 10/709,801
Location (Bldg/Room#): 2A59 (Mailbox #): 2C18 Results Format Preferred (circle): PAPER DISK
****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Inhib of Shp-2 to Enhance Stem Cell Homing

Inventors (please provide full names): C Desponts, et al.

Earliest Priority Date: 5-28-04

Search Topic:
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only ***Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.***

Please search Seq ID No: 14.

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[File 5] **Biosis Previews(R)** 1926-2007/Mar W2

**File 5: BIOSIS has been enhanced with archival data. Please see HELP NEWS 5 for information.*

[File 6] **NTIS** 1964-2007/Mar W2

[File 8] **Ei Compendex(R)** 1884-2007/Mar W1

[File 24] **CSA Life Sciences Abstracts** 1966-2007/Nov

[File 34] **SciSearch(R) Cited Ref Sci** 1990-2007/Mar W2

[File 45] **EMCare** 2007/Mar W2

[File 65] **Inside Conferences** 1993-2007/Mar 15

[File 71] **ELSEVIER BIOBASE** 1994-2007/Mar W2

[File 73] **EMBASE** 1974-2007/Mar 15

[File 94] **JICST-EPlus** 1985-2007/Mar W3

**File 94: JICST will be removed from all vendors on March 31, 2007. Please contact the Knowledge Center for alternative files.*

[File 98] **General Sci Abs** 1984-2007/Mar

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2007/Feb

[File 135] **NewsRx Weekly Reports** 1995-2007/Mar W2

[File 136] **BioEngineering Abstracts** 1966-2007/Nov

[File 143] **Biol. & Agric. Index** 1983-2007/Feb

[File 144] **Pascal** 1973-2007/Mar W1

[File 155] **MEDLINE(R)** 1950-2007/Mar 12

[File 172] **EMBASE Alert** 2007/Mar 15

[File 266] **FEDRIP** 2007/Feb

[File 315] **ChemEng & Biotec Abs** 1970-2007/Feb

[File 357] **Derwent Biotech Res.** _1982-2007/Mar W2

[File 358] **Current BioTech Abs** 1983-2006/Jan

[File 369] **New Scientist** 1994-2007/Nov W2

[File 370] **Science** 1996-1999/Jul W3

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[File 399] **CA SEARCH(R)** 1967-2007/UD=14612

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[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

[File 40] **Enviroline(R)** 1975-2007/Jan

[File 41] **Pollution Abstracts** 1966-2007/Nov

[File 50] **CAB Abstracts** 1972-2007/Feb

[File 103] **Energy SciTec** 1974-2007/Feb B2

**File 103: For access restrictions see Help Restrict.*

[File 156] **ToxFile** 1965-2007/Mar W2

```
?  s ship (s) stem (s) (rnai or sirna or antisense or ribozyme?)
       165859   SHIP
      1210541   STEM
        31408   RNAI
        40122   SIRNA
       231410   ANTISENSE
        47362   RIBOZYME?
S1          9   S SHIP (S) STEM (S) (RNAI OR SIRNA OR ANTISENSE OR RIBOZYME?)

?  rd
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New features available in the latest release of DialogLink 5 (November 2005)

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***BIOSIS Previews Archive (File 552)
***BIOSIS Previews 1969-2007 (File 525)
***Engineering Index Backfile (File 988)
***Trademarkscan - South Korea (File 655)
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RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                    ***
RELOADS COMPLETED
***File 5, BIOSIS Previews - archival data added
***Files 340, 341 & 942, CLAIMS/U.S. Patents - 2006 reload now online
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(File 302).
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Connected to Dialog via SMS00314

?  b biotech biochem medicine
>>>W:            76 is unauthorized
         138 is unauthorized
2 of the specified files are not available
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[File 156] **ToxFile** 1965-2007/Mar W2

[File 162] **Global Health** 1983-2007/Feb

[File 305] **Analytical Abstracts** 1980-2007/Mar W3

File 305: Alert feature enhanced for multiple files, duplicate removal, customized scheduling. See HELP ALERT.

[File 393] **Beilstein Abstracts** 2006/Q4

[File 35] **Dissertation Abs Online** 1861-2007/Feb

[File 91] **MANTIS(TM)** 1880-2006/Jan

[File 149] **TGG Health&Wellness DB(SM)** 1976-2007/Feb W4

[File 159] **Cancerlit** 1975-2002/Oct

File 159: Cancerlit is no longer updating. Please see HELP NEWS159.

[File 164] **Allied & Complementary Medicine** 1984-2007/Mar

[File 444] **New England Journal of Med.** 1985-2007/Mar W1

[File 467] **ExtraMED(tm)** 2000/Dec


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?  s ship (s) stem (s) (rnai or sirna or antisense or ribozyme?)
       165859   SHIP
      1210541   STEM
        31408   RNAI
        40122   SIRNA
       231410   ANTISENSE
        47362   RIBOZYME?
S1          9   S SHIP (S) STEM (S) (RNAI OR SIRNA OR ANTISENSE OR RIBOZYME?)

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[File 444] **New England Journal of Med.** 1985-2007/Mar W1

[File 467] **ExtraMED(tm)** 2000/Dec


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Set     Items   Description
S1          9   S SHIP (S) STEM (S) (RNAI OR SIRNA OR ANTISENSE OR RIBOZYME?)
S2          5   RD  (unique items)
 ; t /3,k/all
>>>W:  KWIC option is not available in file(s): 399
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2/3,K/1 (Item 1 from file: 5) **Links**
Fulltext available through: American Society of Hematology USPTO Full Text Retrieval Options
Biosis Previews(R)

17960421 **Biosis No.:** 200400331207
Identification of Flk-1 target genes in vasculogenesis: Pim-1 is required for endothelial and mural cell differentiation in vitro

Author: Zippo Alessio; De Robertis Alessandra; Bardelli Monia; Galvagni Federico; Oliviero Salvatore (Reprint)
Author Address: Dipartimento Biol Mol, Univ Siena, Via Fiorentina 1, I-53100, Siena, Italy **Italy
Author E-mail Address: oliviero@unisi.it
Journal: Blood 103 (12): p 4536-4544 June 15, 2004 2004
Medium: print
ISSN: 0006-4971
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...and angiogenesis, but its target genes remain elusive. Comparing Flk-1+/+ with Flk-1-/- embryonic **stem** (ES) cells, we identified transcripts regulated by the vascular endothelial growth factor A (VEGF-A ... ...analysis of a number of these genes (Nm23-M1, Nm23-W, Slug, Set, pp32, Cbp, **Ship**-1, Btk, and Pim-1) showed that their products were transiently up-regulated in vivo... ...VEGF-A in human umbilical cord vein endothelial cells (HUVECs). Functional analysis by RNA interference (**RNAi**) in ES cells induced to differentiate demonstrated that Pim-1 is required for their differentiation into ECs and smooth muscle cells (SMCs). In HUVECs, **RNAi** showed that Pim-1 is required in ECs for VEGF-A-dependent proliferation and migration...

2/3,K/2 (Item 1 from file: 357) **Links**
Derwent Biotech Res.

0411148 **DBA Accession No.:** 2006-24644 **PATENT**
Increasing the yield of stem cells in a patient for autologous transplantation comprises administering to the patient the or contacting cells with SH2-domain-containing Inositol 5-Phosphatase inhibitor stem cell yield increase using SH2-domain-containing inositol-5-phosphatase-inhibitor treatment for autologous transplantation and gene therapy

Author: DESPONTS C; WAHLE J; NINOS J; KERR W G
Patent Assignee: UNIV SOUTH FLORIDA 2006
Patent Number: US 20060223749 **Patent Date:** 20061005 **WPI Accession No.:** 2006-668903 (200669)
Priority Application Number: US 709801 **Application Date:** 20040528
National Application Number: US 709801 **Application Date:** 20040528
Language: English
Abstract: DERWENT ABSTRACT: NOVELTY - Increasing the yield of **stem** cells in a patient, in vivo, for autologous transplantation, comprises administering an amount of SH2-domain-containing Inositol 5-Phosphatase (**SHIP**) inhibitor to the patient, and harvesting the **stem** cells from the patient for autologous transplantation; or increasing the yield of **stem** cells from a patient, ex vivo, for autologous transplantation, comprises harvesting target **stem** cells from the patient and contacting the target **stem** cells with **SHIP** inhibitor. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for: (1) a non-invasive method for harvesting **stem** cells from blood (2) a non-invasive method of promoting recovery of a **stem** cell population in a patient; and (3) a method of reducing the population of target cells. BIOTECHNOLOGY - Preferred Method: The **SHIP** inhibitor is selected from RNA interference compounds, **antisense** oligonucleotides, **ribozymes**, DNAzymes, nucleic acid modifiers, PNAs, nonstandard nucleic acids, aptamers, decoys, oligonucleotide based gene regulation, substrate... ...inhibitors, or dominant/negative mutants. The stems cells harvested for transplantation are selected from hematopoietic **stem** cells, mammary **stem** cells, mesenchymal, or organ specific **stem** cells. Harvesting **stem** cells from blood comprises administering **SHIP** inhibitor to a volume of blood and harvesting the **stem** cells from the volume of blood by leukopheresis. The **stem** cells are non-hematopoietic **stem** cells. Administration of **SHIP** inhibitor is conducted for 1-2 weeks. Promoting recovery of a **stem** cell population in a patient comprises administering **SHIP** inhibitor to the patient. The patient is recovering from myeloablation therapy. The **stem** cell population comprises hematopoietic **stem** cells or non-hematopoietic **stem** cells. Reducing the population of target cells comprises administering an amount of **SHIP** inhibitor to a patient. Administration of **SHIP** inhibitor is used in conjunction with chemotherapy. USE - The methods and **SHIP** inhibitor are useful for increasing the yield of **stem** cells in a patient, in vivo, for autologous transplantation, for harvesting **stem** cells from blood, for promoting recovery of a **stem** cell population in a patient, and for reducing the population of target cells. ADVANTAGE - The... ...in a wide variety of genetic, oncologic and infectious diseases in the emerging field of **stem** cell transplantation and eliminates the chance of host rejection as compared to cells produced using...

2/3,K/3 (Item 2 from file: 357) **Links**
Derwent Biotech Res.

0381442 **DBA Accession No.:** 2005-27148 **PATENT**
New isolated polynucleotide comprising an s-ship promoter capable of promoting transcription, useful for useful for promoting transcription in particular cell types and at particular times during development vector-mediated s-ship promoter gene transfer and expression in host cell or trangenic animal for cell type-specific transcription promotion and gene therapy

Author: ROHRSCHNEIDER L R
Patent Assignee: HUTCHINSON CANCER RES CENT FRED 2005
Patent Number: WO 200590559 **Patent Date:** 20050929 **WPI Accession No.:** 2005-649602 (200566)
Priority Application Number: US 554318 **Application Date:** 20040318
National Application Number: WO 2005US8977 **Application Date:** 20050318
Language: English
Abstract: DERWENT ABSTRACT: NOVELTY - An isolated polynucleotide comprising an s- **ship** promoter capable of promoting transcription operably connected to a heterologous nucleic acid sequence from an s-**ship** gene and under the control of a developmental decision promoter, and a marker sequence, where the s-**ship** gene is disrupted by the marker sequence, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an expression cassette comprising an s-**ship** promoter operably connected to a heterologous nucleic acid segment; (2) a vector comprising an s-**ship** promoter; (3) a host cell comprising an s-**ship** promoter operably attached to a heterologous nucleic acid segment; (4) a recombinant host cell in which one or both s-**ship** genes is disrupted by marker sequence; (5) a transgenic animal comprising an s-**ship** promoter region operably attached to a heterologous nucleic acid segment; (6) a mammal having cells comprising an s-**ship** transgenic sequence; (7) a method for expressing a recombinant nucleic acid in a **stem** or progenitor cell; (8) a method of screening for a candidate substance that regulates activity of the s-ship1 promoter; (9) a method for identifying **stem** cells in a population of cells; (10) a method for screening for a modulator of... ...related disease or condition; and (12) a method for expressing a nucleic acid in a **stem** cell. BIOTECHNOLOGY - Preferred Polynucleotide: The promoter comprises at least 20-5000 contiguous nucleotides from 5... ...Preferably, the promoter is capable of promoting tissue-specific transcription. The promoter is an s-**ship** promoter, constitutive, or is inducible or conditional. The promoter is capable of providing expression in embryonic **stem** cells or in adult **stem** cells, where the adult **stem** cells are differentiated but not terminally differentiated. It is also capable of providing expression in adult **stem** cells that are in growing phase. The promoter is also capable of providing expression in... ...providing expression in a cell that is in a developed animal. The cell is a **stem** or progenitor cell in the developed animal. The promoter does not constitutively provide expression in the **stem** or progenitor cell in the developed animal. The developmental decision promoter comprises an s-**ship** promoter region. Preferred Expression Cassette: In the expression cassette, the heterologous nucleic acid encodes a... ...diagnostic gene product is a polypeptide or an RNA molecule. The RNA molecule is a **siRNA** or miRNA molecule. The nucleic acid segment also encodes a therapeutic gene product selected from... ...growth factor, or a growth factor receptor. Preferred Vector: In the vector above, the s-**ship** promoter is operably attached to a nucleic acid segment, where the nucleic acid segment is... ...cell, including a blastocyst cell. The host cell is also a hematopoietic cell or a **stem** or progenitor cell. The **stem** or progenitor cell is from tissue selected from skin, a hair follicle, cornea, embryo, gonads... ...muscle. Preferred Animal: The transgenic animal is a mammal. In the mammal above, the s-**ship** transgenic sequence comprises an s-ship1 coding sequence flanked by loxP sequences. The mammal further... ...of an inducible or conditional promoter. Preferred Method: Expressing a recombinant nucleic acid in a **stem** or progenitor cell comprises transfecting the cell with an expression cassette comprising an s- **ship** promoter operably attached to the recombinant nucleic acid, where the nucleic acid is transcribed. Screening... ...activity of the s-ship1 promoter comprises: (A) contacting a nucleic acid

comprising an s-**ship** promoter with an s-**ship** promoter binding protein and the candidate substance under conditions that allow binding between the protein... ...and the promoter; and (B) contacting the candidate substance with a cell comprising the s-**ship** promoter operably attached to a reporter gene coding for an expression product and assaying for expression of the reporter gene expression product. Identifying **stem** cells in a population of cells comprises administering to cells in the population a nucleic acid comprising an s-**ship** promoter operably attached to a reporter gene. The cells are in an organ. The cells... ...of the reporter gene. Screening for a modulator of cell function comprises: (A) transfecting a **stem** or hematopoietic cell with an expression cassette comprising an s-**ship** promoter operably attached to a nucleic acid encoding a candidate modulator; and (B) assaying the... ...related disease or condition comprises transfecting a cell with an expression cassette comprising an s-**ship** promoter region operably attached to a therapeutic nucleic acid, and administering the cell to the ... ...Alternatively, the blood-related condition is anemia. The blood-related condition can be treated with **stem** cell replacement therapy. Expressing a nucleic acid in a **stem** cell comprises providing to a cell a polynucleotide including the nucleic acid under the control... ...times during development. The nucleic acid molecules, host cells, and transgenic organisms having an s-**ship** promoter, and methods of using the promoter are useful for transcription, expression studies, **stem** cell analyses, and therapeutic applications. They are useful for treating blood-related disease or condition...

2/3,K/4 (Item 3 from file: 357) **Links**
Derwent Biotech Res.

0293601 **DBA Accession No.:** 2002-15448 **PATENT**
Suppressing or preventing rejection of transplant in patient, or treating or preventing graft-versus-host disease in patient comprises administration of a substance that inhibits SH2-containing inositol polyphosphatase function vector mediated gene transfer and expression in host cell for transplantation therapy, drug screening and gene therapy

Author: KERR W G
Patent Assignee: UNIV SOUTH FLORIDA 2002
Patent Number: WO 200224233 **Patent Date:** 20020328 **WPI Accession No.:** 2002-435045 (200246)
Priority Application Number: US 314099 **Application Date:** 20010823
National Application Number: WO 2001US29158 **Application Date:** 20010919
Language: English
Abstract: ...transplant, by administering to the patient, a substance (I) that inhibits SH2-containing inositol polyphosphatase (**SHIP**) function. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a therapeutic composition comprising a substance that inhibits **SHIP** function in a carrier; (2) screening (M1) a substance suspected of inhibiting **SHIP** function involves providing a cell line that comprises an indicator of **SHIP** function; contacting the cell line with the substance; and measuring the response of the indicator to the substance, where the effectiveness of the substance as an inhibitor of **SHIP** function is assessed from the response to the indicator; (3) screening a candidate genetic construct for inhibiting **SHIP** function, involves providing an NK cell line that comprises an indicator of **SHIP** function, contacting the cell line with the genetic construct; and measuring the response of the... ...to the genetic construct; whereby the effectiveness of the genetic construct as an inhibitor of **SHIP** function is assessed from the response of the indicator; (4) screening (M2) a substance suspected of inhibiting **SHIP** function, involves allowing **SHIP** to react with a **SHIP** substrate in the presence of the substance, and taking a first measurement of signal that indicates the extent of the **SHIP** /substrate reaction; allowing **SHIP** to react with a **SHIP** substrate in the absence the substance; and taking a second measurement of the same signal that indicates the extent of the **SHIP**/substrate reaction; and comparing the first and second measurements, whereby a substance that inhibits **SHIP** function is selected; (5) a mouse cell (II) comprising a SHIPflox allele of a **SHIP** gene which includes a first exon and a promoter, where at least the first exon... ...mouse (III) comprising (II); (7) a mouse embryo (IV) comprising one or more (II) (embryonic **stem** cells); and (8) a transgenic mouse (V) derived from (IV). BIOTECHNOLOGY - Preferred Substance: (I) used in the method comprises a genetic construct that directs expression of an antagonist of a **SHIP** function. Preferably the genetic construct comprises an anti-sense polynucleotide, a polynucleotide that bind to **SHIP** mRNA, a nucleic acid that hybridizes to a **SHIP** mRNA, a recombinant retroviral vector, a **ribozyme**, an RNA aptamer, a peptidomimetic inhibitor of **SHIP** function, or their combination. Optionally (I) is the small molecule inhibitor of **SHIP** activity having a molecular weight of less that about 10000. Preferred Methods: In (M1), the... ...a natural killer (NK) cell line, and the response of the indicator (fluorogenic substrate of **SHIP**) to the substance is measured by flow cytometry or by a multi-well fluorescence detector... ...The substance which is contacted with the cell line is a small molecular inhibitor of **SHIP** activity, an anti-sense oligonucleotides, a peptidomimetic inhibitor of **SHIP** function, **ribozymes**, nucleic acid, polynucleotide, naked DNA, recombinant retroviral vector, RNA aptamer, anti-sense oligonucleotide, or their combination. Most preferably the small molecular inhibitor is a suicide substrate for **SHIP**. In (M2), **SHIP** is allowed to react with a **SHIP** substrate such as Shc, Grb2, the FcRIIB receptor, PIP3, and IP4, or their modification, in the presence of a substance such as small molecule inhibitor of **SHIP** activity, an oligonucleotide, a peptidomimetic inhibitor of **SHIP** activity, an oligonucleotide, a peptidomimetic inhibitor of

SHIP function, a **ribozymes**, a polynucleotide, a polypeptide, an anti- **SHIP** antibody, or an RNA aptamer. Preferred Cell: (II) (preferably an embryonic **stem** cell) is homozygous with regard to the SHIPflox allele. Preferred Transgenic Mouse: (III) has a genotype of **SHIP**. (V) does not express **SHIP** protein. ACTIVITY - Immunosuppressive. No supporting data provided. MECHANISM OF ACTION - **SHIP** function inhibitor; suppressor of natural killer (NK) cell-mediator activities; **antisense** therapy. A cohort of **SHIP**-/- mice and their **SHIP**+/+ littermates were transplanted with whole bone marrow (BM) from BALB/C mice following lethal irradiation... ...cells (Mac-1+/Gr-1+) or T cells (CD3+) in peripheral blood of a representative **SHIP**-/- BM transplantation survivor. 86% of the **SHIP**-/- mice survived lethal irradiation without developing GVHD out to 10weeks post-transplant while only 36% survived in the **SHIP**+/+ cohort. Analysis of the survival differences between the two cohorts using the Kaplan-Meier log-rank test confirmed that survival of **SHIP**-/- mice was dramatically enhanced relative to their **SHIP**+/+ littermates (p=0.007). Nine of fourteen **SHIP**+/+ mice died during the 10 week post-transplant period and prior to death exhibited one...

2/3,K/5 (Item 1 from file: 399) **Links**
CA SEARCH(R)

145369856 **CA:** 145(19)369856u PATENT
Inhibition of SHIP to enhance stem cell harvest and transplantation
Inventor (Author): Desponts, Caroline; Wahle, Joseph; Ninos, John; Kerr, William G.
Location: USA
Assignee: University of South Florida
Patent: U.S. Pat. Appl. Publ. ; US 20060223749 A1 **Date:** 20061005
Application: US 2004709801 (20040528) *US 2001955174 (20010919) *US 2003PV320233 (20030528)
Pages: 28pp., Cont.-in-part of U.S. Ser. No. 955,174.
CODEN: USXXCO
Language: English
Patent Classifications:
Class: 514012000
IPCR/8 + Level Value Position Status Version Action Source Office:
A61K-0048/00 A I F B 20060101 20061005 H US